

# Sample Emergency Plan

(for Community Systems Serving 500 People or Less)



This sample emergency plan (plan) is intended to illustrate a general plan that is well suited to public water systems serving 500 or fewer people. The content of this plan is based on the Emergency Plan Guide (Guide) document for small systems that is available from the Department of Environmental Services (DES). It is also based on New Hampshire Administrative Rule Env-Ws 360.15, which requires all community public water systems in this state to have an emergency plan. **You are not required to use this sample plan – it is simply a tool to help you write your own plan. Since each system is different this plan merely offers ideas, which may or may not apply to your system. If you have already developed a plan of your own you may submit that, as long as it includes the minimum requirements and signatures. Our sample plan refers to a fictional water system called Granite Mobile Home Park (MHP). Instructions are in *italics* and example plan language are in **bold**.**

## System Identification (Section 1 of the Guide)

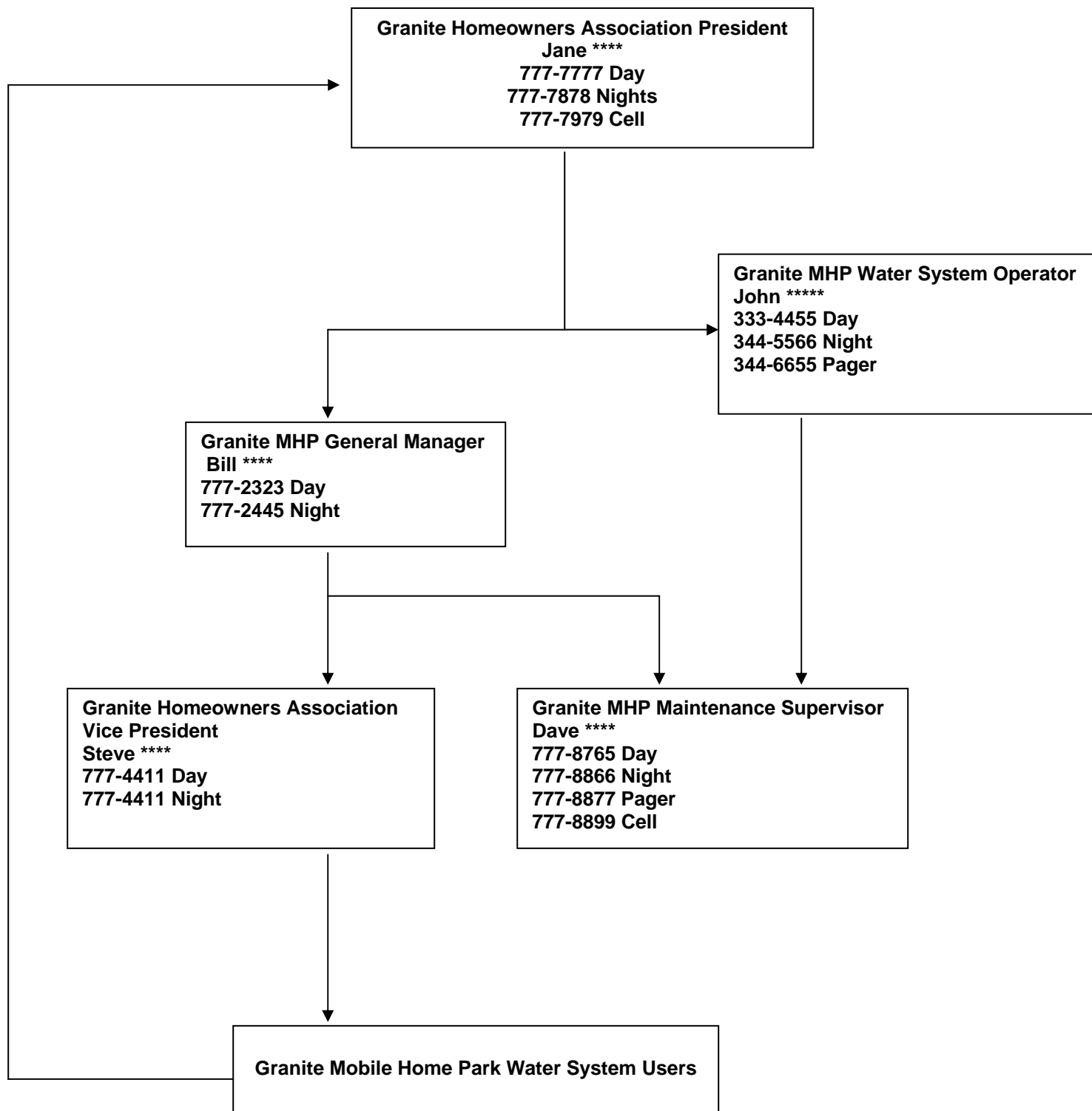
*{For system identification, simply fill out Section 1 of the Guide as shown below. Information about your system is available through the DES website at [www.des.state.nh.us](http://www.des.state.nh.us) under One Stop Data Retrieval: Public Water System Information, or call the DES at 271-7017. }*

System Identification Table – Guide Page 1

System EPA Identification Number	2993020		
System Name	Granite Mobile Home Park		
Town	Anytown		
Source ID/Type/Description/Well Yield from DES records	001 / BRW / 65 feet southwest of pumphouse		12 gpm
Source ID/Type/Description/Well Yield from DES records	002 / BRW / 145 feet west of pumphouse		18 gpm
Source ID/Type/Description/Well Yield from DES records			gpm
Population Served and Service Connections from DES records.	238 people	95 connections	
System Owner (the owner must be listed as a person's name)	Granite Homeowners Association – Jane Doe, President		
Name, Title, and Phone Number of person responsible for maintaining this emergency plan.	Jane Doe / President / Granite Homeowners Association		777-7777 phone

## Chain of Command Flow Chart (Section 2 of Guide)

{Your plan must include a Chain-of-Command flow chart such as the fictional one for Granite MHP shown below. On your chart include **all the key** people who will be responsible for managing an emergency at your water system. The person shown at the top has overall responsibility for managing an emergency at your system. The Chain of Command (section 2) and Notification Procedures (section 3) are an important part of your plan.}



## **Chain of Command Responsibilities** (Section 2 of Guide)

*{Your plan must include a brief description of each key person's responsibilities during an emergency. Listing the responsibilities, such as shown below for Granite MHP is a recommended way of doing this. Be sure to include everyone shown on your chain-of-command flow chart. Please note that each system is different and so are each systems responsibilities. Therefore, the list below may or may not include all of the responsibilities for each person in your system.}*

### **Granite Homeowners Association President**

1. Overall responsibility for managing a water emergency at Granite MHP.
2. Immediately notify the Granite MHP General Manager and Water System Operator of the existence of a water emergency.
3. If necessary, immediately notify local and state emergency agencies, such as police, fire, ambulance, health, and DES Water Supply Engineering Bureau.
4. Be available as contact person for local and state emergency agencies.
5. Instruct the General Manager to implement the system user and service/repair notification procedures.
6. If necessary, instruct the General Manager to implement the boil order, alternate water procedures, and/or water conservation measures.

### **Granite Mobile Home Park Water System Operator**

1. Be available as necessary to provide hands-on knowledge of system components.
2. Be available as necessary to provide specialized repair of system components such as pumps, water treatment devices and valves. (Note: Not all small system operators have this expertise – check with your operator and if you need to, look into other specialists to contact in emergency situations)
3. Be available as necessary to take water samples and to transport them to a certified laboratory for analyses.
4. Oversee and coordinate the return to normal operation.

### **Granite Mobile Home Park General Manager**

1. Instruct Homeowners Association Vice President to implement system user notification procedure.
2. Implement service/repair notification procedure.
3. Oversee service/repair efforts.
4. Immediately notify the Maintenance Supervisor of the existence of an emergency.
5. If necessary, oversee and implement boil order and alternate water procedures plus water conservation measures.

### **Granite Homeowners Association Vice President**

1. Implement and oversee system user notification procedure.
2. Implement unique system user notification procedure.
3. Implement notification of abutting public water system.
4. Be responsible for and maintain up-to-date notification lists and notification tree contacts.
5. If necessary assist General Manager with boil order, alternate water efforts, and/or water conservation measures.

### **Granite Mobile Home Park Maintenance Supervisor**

1. Make available and coordinate use of system equipment such as keys, maps, tools, spare parts, vehicles, and backhoe during an emergency.
2. Assist as necessary with service/repair efforts.
3. Assist as necessary water system operator with return to normal operation procedures.

### **Granite Mobile Home Park Water System Users**

1. Immediately notify the Homeowners Association President of the presence of a water emergency.

## **Notification Procedures (Section 3 of Guide)**

*{A good emergency plan covers 3 aspects of notification: (1) delegating the responsibility to oversee and accomplish notification; (2) establishing the process of notification, i.e. the procedure you will use to quickly disseminate information to appropriate parties; and, (3) assembling lists of appropriate parties to contact. This section covers step 2 – writing out your notification procedure, which is an important step in the notification process. In our sample, a telephone/email tree is the basic means of accomplishing notification. When you write your plan please keep in mind that the larger the system, the more complicated rapid notification becomes. Therefore, the notification procedure you choose should be effective for the size of your system. Your submitted plan must include a written notification procedure. Keep in mind that a system may identify several possible notification list scenarios as illustrated below for Granite MHP.}*

### **Water System Users**

The Granite Homeowners Association Vice President is responsible for implementing notification to the water system users. Granite MHP has approximately 95 service connections, or one connection per household. Notification will be accomplished through utilization of a “telephone” and “email” tree. According to prior arrangement, the Vice President will notify 12 specified households. Those twelve households will in turn notify a pre-set list of other households using telephone/email until all 95 households have been notified. Each household will be responsible for notifying all other people who reside in that home. For households that cannot be reached by electronic communication, a notice will be posted on their door no more than 3 hours after notification begins. Notices will also be posted in common areas of the Granite MHP including the General Manager’s office and the recreation building. The Vice President is responsible for updating and maintaining the notification tree system.

### **Unique Water System Customer**

Granite MHP has one water system user who requires potable water for medical reasons. During emergencies causing interruption of service, the Homeowners Association Vice President is responsible for providing priority notification to this person. Priority notification will also be given to this person for boil orders and alternate water will be supplied on a priority basis. If the Vice President cannot reach this person by telephone, then a visit to the home will be made. This person is included on our local notification list.

### **Service/Repair**

The Granite Mobile Home Park General Manager is responsible for implementing notification to service/repair contractors. A list of service/repair contractors and phone numbers is part of this emergency plan. The General Manager will use this list to telephone appropriate contractors. If necessary, the Maintenance Supervisor will assist. The Homeowners Association Vice President is responsible for maintaining an up-to-date service/repair contractor list.

### **Local and State Agencies**

The Granite Homeowners Association President is responsible for implementing notification to local and state agencies. A list of local and state agencies and phone numbers is part of this emergency plan. The President will use this list to telephone appropriate agencies. If necessary, the General Manager will assist. The Homeowners Association Vice President is responsible for maintaining an up-to-date local and state notification list.

### **Abutting Public Water Systems**

Granite MHP has one abutting public water system. If necessary, the Homeowners Association Vice President will notify the abutting Waters MHP using telephone or email. The telephone number of the system is part of this emergency plan. This notification will be done after the water system user notification is completed.

## Notification Lists (Section 3 of Guide)

{A good plan will include up-to-date notification lists. The notification lists on page 2 of the Guide are only a reference. Adapt them to meet your system needs. Be thorough, and remember to update your lists as necessary and on an annual basis.}

### Local Notification List

Notification List Boilerplates – Guide Page 2

Fire Dept day 333-3333	Fire Dept night 333-3333
Police Dept day 444-4444	Police Dept night 444-4444
Ambulance service day 555-5555	Ambulance service night 555-5555
Health Office day 567-7890	Health Office night 567-8100
Water System Operator day 222-2222	Water System Operator night 222-4455
Neighboring Water System day Waters Mobile Home Park 777-9988	Neighboring Water System night Waters Mobile Home Park 777-4567
Neighboring Water System day	Neighboring Water System night
Other Code Enforcement Officer Day 334-0751	Other Code Enforcement Officer Night 334-0863
Other Sam **** Unique Customer Day 777-1981	Other Sam **** Unique Customer Night 777-1981

### State Notification List

State Police day 1-800-852-3411	State Police night 1-800-852-3411
Water Supply Engineering Bureau day 271-2513 or 271-3503	Water Supply Engineering Bureau night 271-2513 or 271-3503
Office of Emergency Management day 271-2231 or 1-800-852-3792	Office of Emergency Management night 271-2231 or 1-800-852-3792
Public Health Services day 271-4496	Public Health Services night 271-4496
Other	Other

### Service/Repair Notification List

Electrician day Davis Electric 676-4242	Electrician night 676-6677
Electric Utility day PSNH 800-123-4567	Electric Utility night 800-123-4567
Plumber day Hall Plumbing Co. 727-3434	Plumber night 727-3434
Pump Specialist day Water Pump Co. 662-6262	Pump Specialist night 662-6262
Soil Excavator day Jones Excavation 881-8181	Soil Excavator night 881-9999
Equipment Rental day Super Rentals 800-543-2109	Equipment Rental night 800-543-2109
Other XYZ Water Company Day 229-9999	Other XYZ Water Company Night 229-9999
Other ABC Water Company Day 819-0022	Other ABC Water Company Night 819-0022
Other Sewer Pumping Co. day – 822-2288	Other Sewer Pumping Co. night – 822-8822 (page)
Other Local Construction Co. (pipeline repair) day – 333-4567	Other Local Construction Co. (pipeline repair) night – 333-4567

After you complete your notification lists, don't forget to answer the Notification and Unique Water System Customer Questions on page 3 of the Guide as shown below.

### Notification Questions

Notification Questions – Guide Page 3

Does this system have a specific location(s) where up-to-date notification information, including phone numbers of key officials and services, is kept at all times?	Yes <input checked="" type="radio"/>	1
Are the key decision-makers of this system clearly aware of where to quickly find this information?	Yes <input checked="" type="radio"/>	2
Are the key decision-makers of this system familiar with your notification procedures?	Yes <input checked="" type="radio"/>	3
If you circled "no" to line 1, 2, or 3, when will the situation be corrected?	N/A	4

Unique Customer Question – Guide page 3

Does this system have service customers with unique water needs?	Yes <input checked="" type="radio"/> No <input type="radio"/>	5
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## System Components (Section 4 of the Guide)

{A good emergency plan will include a list of your system's primary features. Refer to the section headed System Equipment on page 3 of the Guide for the features you should include at a minimum. It is a good idea to also list important repair equipment that you may have such as excavation equipment or significant spare parts. If you have an atmospheric storage tank you will need to indicate whether or not it is equipped to accept truck delivery of bulk water and you will need to answer the questions about atmospheric tanks on page 3 of the Guide. Below are a typical list of system components and the atmospheric tank questions for our sample plan.}

### System Equipment

1. Bedrock Well #001 – 65 feet Southwest of pumphouse – 17,280 gallons per day maximum 24-hour production.
2. Bedrock Well #002 – 145 feet West of pumphouse – 25,920 gallons per day maximum 24-hour production.
3. Single pumphouse located 75 feet west of lot 14, at end of dirt access road.
4. One 20,000-gallon atmospheric storage tank equipped with a capped and locked fill pipe located adjacent to the pumphouse.
5. One 6,000-gallon pressure storage tank located adjacent to the pumphouse.
6. Iron/Manganese treatment system located inside the pumphouse.
7. One Case 280 backhoe.
8. One pickup truck with snowplow.
9. One air compressor.
10. Welding equipment.

Atmospheric Storage Tank Questions – GuidePage 3

Does this system have an atmospheric storage tank? If yes, how many?	Yes <input checked="" type="radio"/> No <input type="radio"/> <u>1</u> # tanks	6
Are your atmospheric storage tank(s) equipped with a fill pipe for supplied water?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a	7

**System Plan**

*{You need to submit an engineering plan of your water system that accurately shows all its primary components, including important subsurface components such as distribution lines and key shutoff points. However, DES recognizes that some systems may be concerned with providing this information to DES since it becomes available to the public once it has been submitted. If you have this concern, please do not submit your plan. Instead provide an explanation regarding the status of your plan. DES will review the plan during sanitary surveys. DES also realizes that some systems will not have an engineering plan of their water system. If that is the case with your system, we do not expect you to incur the cost of having such a plan prepared. Instead, you can draw a schematic of your system keeping in mind that you should be as accurate as possible. Use a scale that is workable and appropriate for your system (1 inch = 100 feet is a workable scale for many small systems). Another method might be to draw your system on an existing street or tax map.}*

**System Design**

*{Shown below is our fictional system's brief description of its ability to isolate sections of the distribution system and the System Design table on page 4 of the Guide.}*

**Granite MHP is a 2-loop system. The attached schematic shows our primary distribution lines and the shutoff valves that can isolate each loop. The pumphouse contains manual and electronic controls for shutting down each or both loops of the system. The pumphouse also contains manual and electronic controls for shutting off each or both of our wells.**

System Design Table – Guide Page 4

What is the total production capacity of this system?	<b>43,200</b> gallons per day	9
What is the total storage capacity of this system?	<b>26,000</b> gallons	10
What is the average daily demand of this system?	<b>14,400</b> gallons per day	11
What is the maximum daily demand of this system?	<b>21,600</b> gallons per day	12
Divide total storage capacity by average daily demand.	<b>1.8</b> days	13

**Boil Order** (Section 5 of the Guide)

*{Below is an example of typical language a small system could use to describe its process of implementing a boil order.}*

**The General Manager under instruction by the Homeowners Association President will implement a boil order notification at Granite MHP. If necessary, the Homeowners Association Vice President will assist the General Manager. Granite MHP will refer to the DES and/or the Town Health Officer to make decisions requiring or canceling a boil order. Granite MHP will use the same telephone/email tree and notice posting system described earlier to implement a boil order and also to cancel a boil order. Priority notification will be given to our unique system customer.**

**Alternate Water Source** (Section 6 of the Guide)

*{An important part of a plan is to establish how a system will provide alternate water if necessary during an emergency. As discussed on page 4 of the Guide, small systems are required to submit brief discussions of bottled/bulk water, new sources, and tie-in to adjacent systems as viable sources of alternate water. Below are examples of typical language a system could use to describe its process of supplying alternate water. You also need to answer a few questions on page 4 of the Guide as shown below.}*

**Bottled and Bulk Water**

Granite MHP will utilize bulk truck water delivery to provide drinking water during a prolonged emergency. We discussed our water needs with XYZ Company who indicated that they would deliver bulk water to us in approximately 4 hours under normal driving conditions. Deliveries will be in 6,000-gallon increments with a maximum of 2 trucks delivering in tandem. Our second choice to provide bulk truck water is ABC Company. The phone numbers of XYZ and ABC Companies are in the service/repair notification list. If necessary, Granite MHP will provide bottled water to our unique system customer on a priority basis.

Bottled/Bulk Water Questions – Guide page 4

Have you discussed your potential water needs with at least 2 suppliers?	<input checked="" type="radio"/> Yes <input type="radio"/> No	14
Approximately how long will it take for bottled or bulk water to reach this system?	4 hours	15

**New Source**

This is not an alternate water source option for Granite MHP because we do not have any inactive sources to potentially reactivate and because our two current wells are more than adequate to meet our water supply needs.

**Abutting System**

Waters Mobile Home Park abuts Granite MHP to the West. The Granite Homeowners Association President contacted the President of Waters MHP to discuss the feasibility of providing a connection point between the two systems as an emergency standby. Waters MHP was receptive to the idea but expressed that details would need to be worked out and an agreement reached. Granite MHP and Waters MHP agreed to meet in the near future to further discuss the idea. At this time it is not known how the connection could be made.

Adjacent System Tie-in Questions – Guide page 4

Are any water systems situated adjacent to this system?	<input checked="" type="radio"/> Yes <input type="radio"/> No	16
Have you discussed the feasibility of connecting to another system with representatives of that system(s)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	17
Is it feasible for this system to connect to an adjacent system? If yes, attach a general description of how you would make the connection.	<input checked="" type="radio"/> Yes <input type="radio"/> No	18

**Water Conservation (Section 7 of the Guide)**

*{Emergency response actions often include water conservation as a means of coping with the loss of source capacity. An obvious example is a drought, where conservation may be the only response action taken. Therefore, a good emergency plan for a water system will set forth water conservation measures, estimate how much water could be saved, describe how it will be implemented, and who will oversee it. The degree of water conservation necessitated by an emergency can be dependent upon factors such as the nature, severity, and duration of an emergency, seasonal demands on your system, storage capacity, and excess capacity. Consequently, a system may decide to develop various water conservation scenarios based on need. A typical plan section on water conservation for a small system is shown below. }*

**Granite MHP will implement the following water conservation measures as necessary in the event of a water system emergency:**

- 1. Watering gardens, lawns and other landscaped areas will be restricted at a minimum or banned entirely.**
- 2. Washing cars, trucks, boats, RVs, etc., will be restricted at a minimum or banned entirely.**
- 3. Using water from a hose to rinse or clean sidewalks, driveways, decks, etc. will be restricted at a minimum or banned entirely.**
- 4. Filling swimming pools will be restricted at a minimum or banned entirely.**
- 5. Residents will be required to follow indoor water use restrictions adopted from DES Fact Sheet #WD-WSEB-26-2 that lists water efficiency practices for indoor domestic water use.**
- 6. In a prolonged or dire emergency requiring reliance on bulk water, rationing will be implemented.**

If an emergency necessitates shutting down one of our wells, the excess capacity in the remaining well will be used to supply our system. Similarly, with both wells operational our excess capacity allows us to meet average daily demand while absorbing significant reduction in pumping volumes. Despite our excess capacity, Granite MHP will implement at its discretion water conservation measures during an emergency. For most emergencies, it will be adequate to implement conservation measures 1, 2, 3, and 4 as restrictions. The President of the Homeowners Association will decide whether measures 1 through 4 will be restrictions or bans. System demand at Granite MHP is greatest in the summer months with an average daily summer demand of approximately 16,200 gallons. Consequently, we estimate that if an emergency occurs in the summer, by implementing measures 1 through 4 as bans, average daily summer demand would immediately be reduced by approximately 30 to 40 percent. This would reduce our average daily summer demand to approximately 9,720 to 11,340 gallons, below the capacity of either of our wells and well below the total production capacity of our system. Additional demand reductions would be achieved by implementing step 5. Water conservation options are more limited during a winter emergency although this is balanced by the lower overall daily demand. In accordance with step 5, by the end of 2002 Granite Homeowners Association will establish a set of Guidelines for domestic indoor water use conservation that could be implemented in the event of a water emergency. The Granite Homeowners Association encourages the use of water conservation practices at all times.

In the event of a severe emergency necessitating the use of bulk truck delivery of water, measures 1 through 4 will be instituted as bans, and measure 6 will be put into effect. If that happens, measure 6 will supercede measure 5. Rationing per household will be computed to reduce our daily demand to less than 6,000 gallons (average truckload of water). At that rate, when full our total storage capacity would provide for over 4 days of consumption, which more than doubles our average number of storage-days. Granite Homeowners Association will establish a set of Guidelines for water rationing by the end of 2002.

The General Manager under instruction by the Homeowners Association President will implement water conservation notification at Granite MHP. If necessary, the Homeowners Association Vice President will assist the General Manager. Granite will use the same telephone/email tree and notice posting system described earlier to implement and cancel water conservation measures.

## Return to Normal Operation (Section 9 of the Guide)

*{Your plan must include a brief description of the process you will use to return your system to normal operation following an emergency. A typical description that a small system might use for this topic is shown below.}*

The decision when to return to normal system operation will be made by the Homeowners Association President. The President will make this decision with input from the DES if contamination is the cause of the emergency event. Granite MHP's Certified Operator will have the responsibility of overseeing the return to normal operation of the system components. Granite MHP's Maintenance Supervisor will assist the Certified Operator if necessary. The Certified Operator will do any additional water sampling that may be necessary to assess system conditions before returning to normal operation. All water system users will be notified using the same telephone/email tree and notice posting system described earlier when the system has been returned to normal operation.

## Plan Readiness (Section 10 of the Guide)

*{Plan readiness is the arrangements made by the system to ensure that its plan is always functional and available for use on very short notice (perhaps measured in minutes). At a minimum, all key people must know where to quickly find the plan and be familiar with their roles. Each key person should have a copy of each updated plan. Other pertinent places to store up-to-date plans include system offices, pumphouses, and meeting rooms. An important issue for systems with homeowners associations (like our fictional Granite MHP) is that each successive group of association officers be briefed on all aspects of your plan. Emergency plans are required for all community water systems, so it is simply good common sense that the people responsible for using and maintaining the plan be aware of it, understand it, and know the requirements they need to meet. Your emergency plan must include a brief description of your plan readiness arrangements. You also need to answer the plan readiness questions on page 5 of the Guide. A sample plan readiness description and answered questions are below.}*

**Granite MHP has taken the following steps to ensure plan readiness:**

1. Each person listed on our chain-of-command will keep a copy of this and each annually updated plan in their residence.
2. A copy of our most recent plan will be kept in the Homeowners Association meeting room.
3. A copy of our most recent plan will be kept in the General Manager's Office.
4. A copy of our most recent plan will be posted in our recreation building.
5. A copy of our most recent plan will be kept in our pumphouse.
6. The cover of our plan is brightly colored to make it easy to find.
7. An article about our plan will be placed in our newsletter so all our customers know it exists.
8. In all cases, earlier plans will be discarded after receipt of a newer plan.
9. Each successive group of Homeowners Association Officers will be briefed on all aspects of our emergency plan.
10. Granite MHP will rehearse the plan once every 2 years.

Plan Readiness Questions – Guide Page 5

Do the key representatives of this system know about this emergency plan?	Yes	23
Has this system clearly defined for each key person what his or her responsibilities will be during an emergency, i.e., does each key person clearly understand their role?	Yes	24
Has this system rehearsed this emergency plan within the last two years?	Yes	25
For property owner associations: will each successive group of officers be informed of the existence of, and briefed on, all aspects of this emergency plan?	Yes No N/A	26

## Signatures (Section 11 of the Guide)

*{The owner of each small system must sign the completed emergency plan to attest that the information is accurate. If another party such as an independent water system operator is the primary author of the plan, they must sign the plan in addition to the system owner.}*

## Vulnerability Assessment (Section 8 of the Guide)

*{A vulnerability assessment was not included with this sample plan because it is not required under Env-Ws 360.15. The purpose of a vulnerability assessment is to identify potential causes of emergencies. Both preventable (lack of spare parts, age of equipment, unwise land usage near your sources, etc.) and unpreventable (drought, ice storms, vehicle accidents, terrorism, etc.) causes are identified. Once potential causes are identified, a system can take preventative actions to reduce their susceptibility to an emergency. As such, a vulnerability assessment is a valuable management tool. A vulnerability assessment is the preventative or long-term aspect of emergency planning, while the information in this sample plan is the response, or short-term aspect. A system will greatly improve the effectiveness of its' emergency planning by first doing a vulnerability assessment, and then incorporating its findings into their formal emergency plan. DES strongly recommends that every system voluntarily decide to do a vulnerability assessment.}*

## Additional Guidance Documents

Other helpful documents and information regarding emergency planning, vulnerability assessments and water system security are available on the DES website at [www.des.state.nh.us/wseb](http://www.des.state.nh.us/wseb) under Water System Security.

## Any Questions?

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